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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/419,523	10/18/1999	PAUL PETERSEN	MICE-0051-US	1377

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EXAMINER	
CHACE, CHRISTIAN	
ART UNIT	**PAPER NUMBER**
2189	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/419,523	PETERSEN, PAUL	
	Examiner	Art Unit	
	Christian P. Chace	2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2005*.

2a)☐ This action is FINAL. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *41-68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *41-68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 October 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U:S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 7 February 2005 has been entered.

Response to Amendment

This Office action has been issued in response to amendment submitted 7 February 2005. Claims 1-40 are canceled. Claims 41-68 are pending. As this is a first action on the merits following an RCE, this action has NOT been made final.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 41-68 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention. "Automatically determining whether a characteristic of a memory device is installed in the computer system other than a size of the memory device limits the capacity of the computer system" does not appear to be disclosed in the instant specification. There is some discussion of memory configuration as it relates to admittedly well-known techniques at page 5 and into page 6 of the instant specification, but does not appear to address the automation issue. Applicants are required, in response to this Office action, to point out clearly and particularly the support in the disclosure as originally filed for this limitation to the independent claims.

In addition, claims 52, 60, and 67 recite, "memory examination slots." These, also, do not appear to be in the disclosure as originally filed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 52, 60, and 67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Examiner has no idea what the scope of "memory examination slots" could be. For the purposes of application of prior art, however, examiner has merely interpreted them as memory slots, as is known in the art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 41-42, 45, 48-49, 51-55, 58-65, and 67-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (US Patent # 5,280,599), with RAMBUS Direct RMC.d1 Data Sheet (8/7/98) offered as extrinsic evidence of inherency, and Yoshizawa et al (US Patent # 5,787,464).

With respect to claims 41, 54, and 62, examiner notes that the definition of "memory configuration information," in page 5 of the instant specification and shown in figure 3, is defined as, "type, amount, and operating characteristics of memory." "Residual memory capacity" is defined as the difference between existing memory and maximum possible memory expansion.

Obtaining memory configuration information of a computer system, or, the actual memory of the system, determining a memory capacity of the system, or, the possible memory allowed in the system, and determining memory upgrade options based on a residual memory capacity of the computer system is disclosed in column 2, lines 46-60. Examiner notes that "upgrade options" and "memory characteristics" are very broad in scope, and have been interpreted as such by examiner.

"Automatically determining whether a characteristic of a memory device installed in the computer system other than a size of the memory device limits the memory

capacity of the computer system is inherent. The system must determine whether it is there or not (characteristic other than size). It being present or not will inherently affect the capacity. This is discussed in RAMBUS on page 1, which discloses the optional 1 to 32 RDRAMS that may be connected to the controller, page 40, which discusses the configuration options (number of regions, e.g.), page 41, which discusses the addressing options based on the configuration, page 42, which discloses that initialization "automatically" manages the configuration, including whether a device is present or not, page 45, which elaborates on the mapping techniques, page 57, which shows the actual configuration commands for the number of devices present, and pages 72-75, which discuss initialization of the devices, including "serial presence detect," which applicants are also very strongly encouraged to review.

The difference between the claims and Arai is the explicit recitation of expanding/replacing the number of memory devices.

Yoshizawa et al disclose expanding and replacing the number of memory devices in the abstract.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention, having the teachings of Arai and Yoshizawa et al before him/her, to utilize the expansion/replacement of Yoshizawa et al in the system of Arai as it allows for on-line expansion and replacement of memory modules, as disclosed by Yoshizawa et al in the abstract.

With respect to claims 42, 55, 63, and 65, the act of obtaining memory configuration information comprising obtaining an indication of an installed system memory amount is disclosed by Arai in column 2, lines 46-60.

With respect to claims 45 and 58, the act of obtaining memory configuration information comprising accessing a non-volatile storage device is disclosed by Arai in figure 3 as ROM/BIOS, and further discussed in column 3, lines 53-59.

With respect to claims 48-49, 59, and 64, obtaining the maximum number of memory devices and maximum amount of memory for the computer system are inherent, as the number of address bits, according to the binary number system upon which computers operate, indicate the "amount of memory" which includes the number of "devices." As evidence of inherency, examiner urges applicant to review Dresser et al (discussed below) in column 4, line 66 into column 5, line 1.

With respect to claim 51, providing memory upgrade options to a user is disclosed in column 6, line 45, which discusses a "window" for such information.

Examiner notes that the same obviousness statement and motivation is applicable to all claims noted supra as stated supra with respect to the claims upon which they depend.

With respect to claims 52-53, 60-61, and 67-68, the characteristic comprising a limit on the number of memory devices that can be installed on a memory channel regardless of the number of open slots is inherent, and, the RAMBUS reference discussed supra, particularly with respect to addressing, is evidence of such inherency – only so much space may be addressed by the number of address bits being used in

the entire system – even if one memory slot has a 1 gigabit memory, but the other slots are all open, if that is the maximum memory addressable by the address bus, then that is the only memory that will work in the system.

Claims 43, 56-57, and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai, Yoshizawa et al, and Helm et al (US Pat. # 5,129,069).

With respect to claims 43, 56-57 and 66, Arai and Yoshizawa et al disclose the claimed invention upon which the instant claims depend.

The difference between the instant claim and Arai and Yoshizawa et al is that Arai and Yoshizawa et al, although disclosing a memory amount as shown supra, do not specifically disclose the configuration information comprising a number of memory module sockets.

Helm et al, however, disclose memory module "slots," which examiner interprets as "sockets," in figure 1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, having the teachings of Arai, Yoshizawa et al, and Helm et al before him/her, to obtain the "memory amount" disclosed by Arai and Yoshizawa, based on the number of "sockets" as disclosed in Helm et al, because, as discussed supra with respect to claims 8-9 , 17, and 20, the amount of memory in or available to the system is inherently dependent upon the number of address bits used in the system.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai, Yoshizawa et al, and Cowell (US Pat. # 5,860,134).

Arai discloses the claimed invention upon which the instant claims depend.

The difference between the instant claim and Arai and Yoshizawa et al is that the memory configuration information comprises an operating speed of the installed system memory.

However, Cowell discloses a "type detection," which includes system bus speeds, in column 8, line 35 into column 9, line 35.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, having the teachings of Arai, Yoshizawa et al, and Cowell before him/her, to utilize the type detection of Cowell in the system of Arai and Yoshizawa et al because the type detection signal allows the system to coordinate memory speeds according to the first and second type signals, as disclosed by Cowell, in column 9, lines 34-36, which increase the flexibility of the system, as made hackneyed in the state of the art.

Claims 46, 47, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai, Yoshizawa et al, and Dresser et al (US Pat. # 5,446,860).

With respect to claims 46, 47, and 50, Arai and Yoshizawa et al disclose the claimed invention upon which the instant claims depend.

The difference between the instant claims and Arai and Yoshizawa et al is that the act of accessing a non-volatile storage device comprises accessing a serial

presence detect device. The system of Arai and Yoshizawa et al operates serially. If a program to detect presence of a device is stored in ROM, as it is in BIOS, then it is, technically, a serial presence detect device.

However, assuming *arguendo,* that the above is not the case, Dresser et al disclose serial presence detect data in figure 4. Inherently, if there is serial presence detect data, there is a serial presence detect device to obtain said data, as computers need to be told what to do, so to speak.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, having the teachings of Arai, Yoshizawa et al, and Dresser et al before him/her, to use the serial presence detect device to detect the serial presence of devices in the Arai and Yoshizawa et al system using the device of Dresser et al, because in search for the maximum amount of memory, the presence detect bits denote the maximum amount of memory, as disclosed by Dresser et al in column 4, lines 65-68. Examiner notes that SIMMs, as explicitly disclosed in Dresser et al, are dynamic random access memory devices and are inherently plugged into "slots," by definition. Applicant is invited to see figure 3 of Dresser et al and column 4, line 65 into column 6, line 65 for further discussion of same.

Response to Arguments

Examiner believes that applicants' arguments have been addressed supra.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian P. Chace whose telephone number is 571.272.4190. The examiner can normally be reached on MAXI FLEX.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571.272.4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christian P. Chace
Examiner
Art Unit 2187